

Draft
Maintenance Concept Remains Consistent with Prior Fiscal Year

**STATEMENT OF WORK
FOR
INSPECT, REPAIR ONLY AS NECESSARY
(IROAN)
OF THE
HOWITZER, MEDIUM, TOWED: 155MM, M198
NSN 1025-01-026-6648**

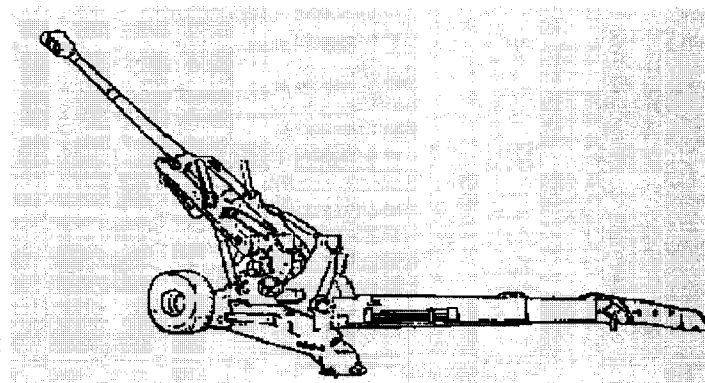
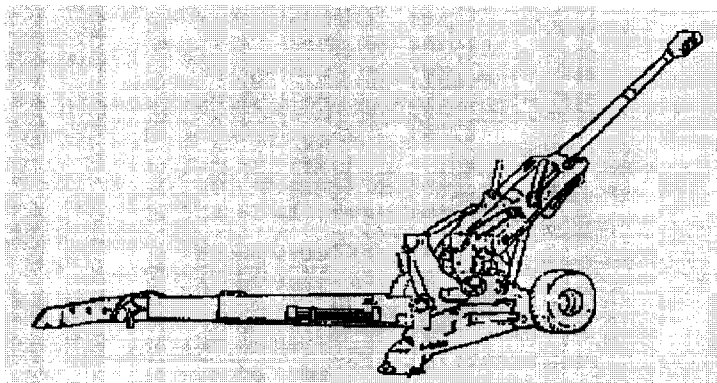


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STATEMENT OF WORK FOR THE IROAN OF THE
HOWITZER, MEDIUM, TOWED: 155MM, M198
NSN 1025-01-026-6648

1.0 SCOPE. This Statement of Work (SOW) and the applicable Depot Maintenance Work Requirements (DMWR) set forth tasks and identify the work efforts required for the Inspect, Repair Only as Necessary (IROAN) of the Howitzer, Medium, Towed, 155MM, M198. This document provides the minimum requirements to restore the Howitzer, Medium, Towed, 155MM, M198 to Condition Code "A." Refer to Appendix A, List of Definitions, and IROAN for Condition Code "A" definition. The National Stock Number (NSN) listed here shall be known as the Howitzer, Medium, Towed, 155MM, M198, NSN 1025-01-026-6648, hereafter referred to as the M198 Howitzer.

1.1 Background. IROAN is defined as "That maintenance technique which determines the minimum repairs necessary to restore equipment components or assemblies to prescribed maintenance serviceability standards by utilizing all available diagnostic equipment and test procedures in order to minimize disassembly and parts replacement."

2.0 APPLICABLE DOCUMENTS. The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirement.

2.1 Military Standards

MIL-STD-129

DoD Standard Practice for Military Marking

2.2 Other Government Documents And Publications. The following government documents and publications form a part of this SOW to the extent specified herein. Unless otherwise specified, the issues are those cited in the SOW.

TM 08198A-34/3

Direct Support and General Support Maintenance Manual For Howitzer, Medium, Towed: 155MM, M198, NSN 1025-01-026-6648

TM 08198A-34P/4

Direct Support and General Support Maintenance Repair Parts and Special Tools List For Howitzer, Medium, Towed: 155MM, M198, NSN 1025-01-026-6648

DMWR 9-1025-211-1

Depot Maintenance Work Requirement (DMWR)

	Cannon, M199 and Recoil Mechanism, M45, Used on Howitzer, Medium, Towed: 155MM, M198, NSN 1025-01-026-6648
TM 9-1240-375-34 w/change 1 & 2	Direct Support and General Support Maintenance Manual For Quadrant, Fire Control: M17, NSN 1290-01-037-3883, Quadrant, Fire Control: M18, NSN 1290-01-037-7289, Mount, Telescope and Quadrant: M171, NSN 1240-01-039-7273, Mount, Telescope and Quadrant: M172, NSN 1240-01-037-7290, Telescope, Panoramic: M137, NSN 1240-01-038-0531, Telescope, Elbow: M138, NSN 1240-01-038-0530
TM 9-1240-375-34P	Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools List) For Quadrant, Fire Control: M17, NSN 1290-01-037-3883, Quadrant, Fire Control: M18, NSN 1290-01-037-7289, Mount, Telescope and Quadrant: M171, NSN 1240-01-039-7273, Mount, Telescope and Quadrant: M172, NSN 1240-01-037-7290, Telescope, Panoramic: M137, NSN 1240-01-038-0531, Telescope, Elbow: M138, NSN 1240-01-038-0530
P12008000	Special Packaging Sheets (SPI)
MI-08198A-35/7	Procedures for Drilling Drain Holes in the Cradle Assembly for the Howitzer, Medium, Towed, 155MM, M198
MI-08198A-35/3	Installation of Ring Shield on Trail Assembly
TM-4700-15/1H	Ground Equipment Record Procedures
SL-3-08198A w/change 1 of 9 August 94	Components List for Howitzer, Medium, Towed, 155MM, M198
DoD 4000.25-1-M	Military Standard Requisitioning and Issue Procedures (MILSTRIP)
MI-08198A-35/8	Install/Remove Hydraulic Power Assist Kit On Howitzer, Medium, Towed, M198

TM 08198A-10/1	Operator's Manual For Howitzer, Medium, Towed: 155MM, M198, NSN 1025-01-026-6648
TM 08198A-20&P/2	Unit Maintenance Manual For Howitzer, Medium, Towed: 155MM, M198, NSN 1025-01-026-6648
TM 9-1000-202-14	Evaluation of Cannon Tubes

Military Handbooks (For Guidance)

MIL-HDBK-61	Configuration Management Guidance
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2.3 Industry Standards

ANSI/ISO/ASQC Q9001-2000	Quality Management Systems-Requirements
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Industry Standards (For Guidance)

ANSI/EIA-649	National Consensus Standard for Configuration Management
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Copies of Military Standards and Specifications are available from the DOD Single Stock Point, Document Automation and Production Service, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, commercial telephone number (215) 697-2179 or DSN 442-2179, or <http://www.dodssp.daps.mil>. Copies of other government documents and publications required by contractors in connection with specific SOW requirements shall be obtained through the Contracting Officer: Contracts Department (Code 891), p. o. drawer 43019, 814 Radford Blvd., Marine Corps Logistics Bases, Albany, GA 31704-3019, commercial telephone number (229) 639-6761 or DSN 567-6761. Copies of engineering drawings, if applicable, shall be obtained from the Supply Chain Management Center, Attn: Code 583-1, 814 Radford Blvd., STE 20320, Albany, GA 31704-0320, commercial telephone number (229) 639-6476 or DSN 567-6476.

3.0 REQUIREMENTS.

3.1 General Tasks. In fulfilling specific requirements, the Contractor Facility shall:

a. IROAN each M198 Howitzer in accordance with the guidance listed in the:

-MIL-STD-129

-DMWR 9-1025-211-1

-MI's-08198A-35/7, 08198A-35/8, 08198A-35/3

-TM 08198A-34/3, TM 08198A-34P/4, TM 08198A-10/1 TM 08198A-20&P/2

and in accordance with ANSI/ISO/ASQC Q9002-1994. Upon completion, IROAN M198 Howitzers shall be in Condition Code "A," as described in Appendix A to this SOW.

b. Provide materials, labor, and facilities necessary to inspect, diagnose, repair, rebuild as necessary and test the M198 Howitzer.

c. Be responsible for all structural and mechanical requirements associated with the IROAN of the M198 Howitzer.

3.2 Specific Tasks. The following tasks describe the phases of M198 Howitzer IROAN:

3.2.1 Phase I - Induction. Induction of M198 Howitzers shall require a joint Limited Technical Inspection (LTI) to ensure the completeness of the M198 Howitzer. A complete M198 Howitzer for IROAN purposes will consist of the M198 Howitzer, Installed Items, and Boxed Repairable Items as listed in SL-3-08198A w/ change 1 of 9 (to include M198 Howitzers without HYPAK Mod) under heading "Supply System Responsibility." A copy of the induction LTI for each M198 Howitzer shall be provided as a means of identification for Supply System Responsibility items, as well as the certification of a complete M198 Howitzer to Marine Corps Logistics Bases (MCLB), (Code B871-2) and Marine Corps System Command (MCSC), Albany, Georgia (Code AFSS-FSS), Suite 20343, 814 Radford Blvd., Albany, GA 31704-0343. The Contractor Facility may induct M198 Howitzers for IROAN if the missing items do not hinder the IROAN process. Determination of induction with missing items shall rest with the Contractor Facility. The Contractor Facility shall not be responsible for missing items identified during the joint LTI.

3.2.2 Phase II – IROAN. IROAN data shall be recorded on M198 Howitzer data plates in accordance with MIL-STD-129, DMWR 9-1025-211-1, TM-4700-15/H and ANSI/ISQC Q9002-1994.

a. Rebuild of the M45 Recoil Mechanism as needed.

b. IROAN data shall be recorded on M198 Howitzer data plates in accordance with MIL-STD-129, DMWR 9-1025-211-1, TM-4700-15/1H and ANSI/ISO/ASQC Q9002-1994.

c. The Contractor Facility shall ensure MI-08198A-35/3, Installation of Ring Shield Skid on Trail Assemblies is applied to each M198 Howitzer.

d. The Contractor Facility shall ensure MI-08198A-35/7, Procedures for Drilling Drain Holes in the Cradle Assembly is applied to each M198 Howitzer.

e. The Contractor Facility shall ensure the Weapons Record Book is updated to reflect all approved modifications in accordance with TM-4700-15/1H, Ground Equipment Record Procedures.

f. The Contractor Facility shall ensure MI-08198A-35/8, Install/Remove Hydraulic Power Assist Kit is applied to each M198 Howitzer once kits are available. No retrofit of completed M198 Howitzers is required.

g. M198 Howitzers to be painted 3-C Green.

3.2.3 Phase III - Inspection And Testing. Inspection and testing shall be in accordance with:

- MIL-STD-129
- DMWR 9-1025-211-1
- MT's 08198A-35/3, 08198A-35/7, and 08198A-35/8
- TM-4700-15/1H, TM 08198A-34/3, TM 08198A-34P/4, TM 9-1000-202-14 and
- TM 9-1240-375-34P and TM 9-1240-375-34 w/change 1 & 2
- SL-3-08198A w/change 1 of 9 August 94
- DoD 4000.25-1-M
- ANSI/ISO/ASQC Q9002-1994

3.2.4 Phase IV – Packaging, Handling, Storage and Transportation (PHS&T)

a. The Contractor shall be responsible for preservation and packaging of items being repaired under the terms of this statement of work. Items scheduled for long term storage or overseas shipment shall be in accordance with level "A" requirements of SPI P12008000, as tailored below, which may be obtained from Storage and Distribution Department (Code 580), Business Management and Support Branch (Code 581), Suite 20320, 814 Radford Blvd., Albany, GA 31704-0320, commercial telephone number (229) 639-6786 or DSN 567-6786. Items scheduled for domestic shipment, immediate use or short-term storage shall be to level "B" requirements.

(1) General Requirements, Page 5, Paragraph 4.0 of the SPI makes reference to 11.00 X 20R tires, which is incorrect. Radial tires, part number 12909220, shall be used.

(2) General Requirements, Page 5, Paragraph 6.0 of the SPI requires that the obturator group be taken apart and boxed separately. This requirement does not apply for the IROAN effort.

(3) Detailed Requirements, Page 15, Paragraph 3.1.1. Upon completion of repair, packaging of the BII shall be the responsibility of the Repair Facility.

(4) Discrepancies between the SPI and SL-3-08198A w/change 1 of 9 August 94, shall be resolved in favor of the SL utilizing in-house level "A" requirements.

b. Marking for shipment and storage shall be in accordance with MIL-STD-129.

c. The Marine Corps will provide the contractor with the shipping address(s) for delivery of the repaired equipment. The contractor shall be responsible for arranging for shipment to the pre-designated site(s). The Marine Corps will be responsible for transportation costs associated with shipping the subject equipment to and from the Contractor.

3.3 Configuration Control. The contractor shall apply configuration control procedures to established configuration items. The contractor shall not implement configuration changes to an item's documented performance or design characteristics without prior written authorization.

The baseline configuration has been defined by the written procedures or material contained in manuals, standards, instructions or engineering drawings. If it is necessary to temporarily depart from the authorized configuration, the contractor shall prepare and submit a Request For Deviation. MIL-HDBK-61 and ANSI/EIA-649 provide guidance for preparing this configuration control document.

3.4 Quality Assurance/Quality Control. The Contractor shall provide and maintain a Quality System that as a minimum, adheres to the requirements of ANSI/ISO/ASQC Q9001-2000, Quality Management Systems-Requirements. Authorized MCSC (Code AFSS-FSS), Albany, Georgia personnel shall be permitted to observe the work/task accomplishment at the Contractor Facility upon prior coordination with MCLB (Code L21), Albany, Georgia and the Contractor Facility.

It shall be the responsibility of the Contractor Facility to ensure that the entire M198 Howitzer system meets the performance requirements delineated in the documents listed in 2.1, 2.2, and 2.3 of this SOW.

3.5 Government Furnished Equipment (GFE)/Government Furnished Materiel (GFM). The Management Control Activity (MCA/Code 573-2) will coordinate Government Furnished Equipment/Government Furnished Materiel (GFE/GFM) requests and maintain a central control system on all government owned assets in the contractor's possession. The MCA will forward GFE Accountability Agreement to the contractor for signature on annual basis to establish a chain of custody and identify property responsibilities for the Marine Corps assets. The contractor is to acknowledge receipt of GFM to the MCA within 15 days of receipt. This can be done by mailing a copy of the DD1348 to the Materiel Management Department, Management Control Activity (MCA/Code 573-2), 814 Radford BLVD., STE 20320, Albany, GA 31704-0320 or faxing a copy to commercial (229) 639-5498 or DSN 567-5498.

Selective interchange is available on a case-by-case basis. Prior approval must be obtained from Marine Corps Systems Command, (Code AFSS-FSS) Albany, Georgia.

3.6 Contractor Furnished Materiel (CFM). The Contractor may requisition materiel as required in the performance of the SOW through the DoD Supply System. DoD 4000.25-1-M (MILSTRIP) Chapter 11 provides guidance to contractors on the requisitioning process. The contractor's decision to utilize CFM procured from the DoD Supply System shall be based upon cost effectiveness, availability of materiel and the required completion/delivery date.

3.7 Rejection. Failure to comply with any of the specified requirements listed herein shall be reason for rejection by MCSC (Code AFSS-FSS), Albany, Georgia. The Contractor Facility shall, at no additional cost to MCSC (Code AFSS-FSS), Albany, Georgia provide the following:

- a. Develop an approach for modification or correction of all deficiencies.

b. Upon approval of a documented approach, the Contractor Facility shall correct the deficiencies and repeat the verification until an acceptable compliance with acceptance test procedures is demonstrated.

4.0 REPORTS. All report deliverables shall be sent to the following address: Marine Corps Systems Command, Attn: Code AFSS-FSS, 814 Radford Blvd., STE 20343, Albany, Georgia 31704-0343.

4.1 Monthly Progress Report. The Contractor Facility shall provide Monthly Progress Reports to Marine Corps Systems Command (Code AFSS-FSS), Albany, Georgia summarizing the progress and status of the IROAN program. The report shall be due the tenth working day of each month for the previous month in the format contained in Appendix B to this SOW.

4.2 Pre-Shop Analysis Checklist. Upon receipt of a M198 Howitzer for IROAN, a copy of the Pre-shop Analysis Checklist shall be forwarded to Marine Corps Systems Command (Code AFSS-FSS), Albany, Georgia in the format contained in Appendix C.

4.3 Final Assembly And Testing Checklist. Upon delivery of an IROAN M198 Howitzer, a copy of the Final Assembly and Testing Checklist shall be forwarded to Marine Corps Systems Command (Code AFSS-FSS), Albany, Georgia in the format contained in Appendix D.

STATEMENT OF WORK
FOR
HOWITZER, MEDIUM, TOWED: 155MM, M198
NSN 1025-01-026-6648

APPENDIX A

DEFINITIONS

1. PURPOSE. The definitions contained in this appendix are provided to assure a more complete understanding of the contents of this SOW.

2. DEFINITIONS

a. IROAN. A maintenance technique which determines the minimum repairs necessary to restore equipment, components, or assemblies to prescribed maintenance serviceability standards by utilizing all available diagnostic equipment and test procedures in order to minimize disassembly and parts replacement.

b. Rebuild. The restoration of an item to a standard as nearly as possible to its original condition in appearance, performance, and life expectancy. This process requires restoring an item of supply to a serviceable condition by disassembly; inspection of each component part and reassemble, using new or serviceable assemblies, subassemblies, and parts; followed by inspection and operational tests. The terms "rebuild" and "overhaul" are synonymous.

c. Condition Code "A". Serviceable/issuable without qualification. New, used, repaired, or reconditioned material which is serviceable and issuable to all customers without limitation or restriction.

d. Contract Data Requirements List (CDRL). The CDRL is a list of data requirements authorized for a specific procurement and the sole contractual document listing the data and information to be delivered under contract.

STATEMENT OF WORK
FOR
HOWITZER, MEDIUM, TOWED: 155MM, M198
NSN 1025-01-026-6648

APPENDIX B

MONTHLY PROGRESS REPORT

<i>USMC Serial Number</i>	<i>MWSLIN</i>	<i>Remarks</i>

STATEMENT OF WORK
FOR
HOWITZER, MEDIUM, TOWED: 155MM, M198
NSN 1025-01-026-6648

APPENDIX C

PRE- SHOP ANALYSIS CHECKLIST

1. M199 CANNON ASSEMBLY

(in accordance with TM 9-1000-202-14 and TM 08198A-34/3)

- a. Overall condition: Inspect for broken, damaged, or missing parts.

Remarks:

- b. Gun Tube Stowage Lock:

(1). Inspect for broken, damaged, or missing parts.

(2). Operational check.

Remarks:

- c. Cannon Tube: Inspect for broken, damaged, or missing parts.

Remarks:

- d. Thermal Warning Device: Inspect for broken, damaged, or missing parts.

Remarks:

- e. Breech Mechanism Assembly: Inspect for broken, damaged, or missing parts.

Remarks:

- f. Firing Mechanism Assembly: Inspect for broken, damaged, or missing parts.

Remarks:

2. M39 Carriage Assembly:

- a. Overall Condition: Inspect for broken, damaged or missing parts.

Remarks:

- b. Cradle Assembly: Inspect for broken, damaged or missing parts.

Remarks:

- c. Top Carriage Assembly: Inspect for broken, damaged or missing parts.

Remarks:

d. Bottom Carriage Assembly: Inspect for broken, damaged, or missing parts and functional condition as required for the following components: (OK for no discrepancies or Rmk for discrepancy and put number and discrepancy in Remarks area).

- (1) Left/right hydraulic ram pump.
- (2) Actuator cylinder.
- (3) Left/right arm and spindle.
- (4) Left/right manual brake assembly.
- (5) Left/right brake head assembly.
- (6) Detent.
- (7) Clevis assembly.
- (8) Left/right transverse stop.
- (9) Left/right carriage spade.
- (10) Left/right trail assembly.
- (11) Left/right trail lock.
- (12) Gun tube travel lock.
- (13) Base plate.

(14) Manifold assembly.

(15) Locking assembly.

(16) Tires and wheels.

Remarks:

3. Traversing Components:

a. Traversing Mechanism:

(1) Inspect for broken, damaged or missing parts.

(2) Perform hand-wheel torque test.

Remarks:

4. Elevation Components:

a. Inspect for broken, damaged or missing parts on all components.

Remarks:

STATEMENT OF WORK
FOR
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NSN 1025-01-026-6648

APPENDIX D

FINAL ASSEMBLY AND TESTING CHECKLIST

Serial Number

Inspector _____ Date

1. PAINTING, REFINISHING AND MARKING

Pass _____ Fail _____ Date

2. ELEVATING MECHANISM TORQUE AND BACKLASH TEST

Pass _____ Fail _____ Date

3. TRAVERSING MECHANISM TORQUE AND BACKLASH TEST

Pass _____ Fail _____ Date

4. SPEED SHIFT ASSEMBLY TEST

Pass _____ Fail _____ Date

5. VARIABLE RECOIL MECHANISM TEST

Pass _____ Fail _____ Date

6. WHEEL ACTUATOR TEST

Pass _____ Fail _____ Date

7. TRUNNION CROSS LEVEL AND PARALLELISM TEST

Pass _____ Fail _____ Date

8. BRAKING SYSTEM TEST

Pass _____ Fail _____ Date

9. ELEVATION/PLUMB TRACKING TEST

Pass _____ Fail _____ Date _____

10. FUNCTION FIRING TEST
(DMWR 9-1025-211-1)

Pass _____ Fail _____ Date _____

11. FIRE CONTROL TEST

Pass _____ Fail _____ Date _____

12. BORESIGHT RETENTION TEST

Pass _____ Fail _____ Date _____